Interpreting Streamflow Forecasts

Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

Most Probable (50 Percent Chance of Exceeding) Forecast. This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations. There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast; it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

70 Percent Chance of Exceeding Forecast. There is a 70 percent chance that the streamflow volume will exceed this forecast value. There is a 30 percent chance the streamflow volume will be less than this forecast value.

90 Percent Chance of Exceeding Forecast. There is a 90 percent chance that the streamflow volume will exceed this forecast value. There is a 10 percent chance the streamflow volume will be less than this forecast value.

To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

30 Percent Chance of Exceeding Forecast. There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecast value.

10 Percent Chance of Exceeding Forecast. There is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

Using the forecasts—an example

Using the Most Probable Forecast. Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Deeth between March 1 and July 31.

Using the Higher Exceedance Forecasts. If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

Using the Lower Exceedance Forecasts. If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

UPPER HUMBOLDT RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<-----DRIER------ FUTURE CONDITIONS -----WETTER-----> Chance of Exceeding 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
MARY'S RIVER nr Deeth	MAR-JUL	5.0	20.0	36	77	52	76	47
	APR-JUL	8.0	17.0	31	74	45	67	42
LAMOILLE CREEK nr Lamoille	MAR-JUL	6.0	16.0	24	79	32	43	31
	APR-JUL	4.0	15.0	22	75	30	41	30
NF HUMBOLDT RIVER at Devils Gate	MAR-JUL	6.0	12.0	43	73	74	121	59

For more information concerning streamflow forecasting ask your local SCS field office for a copy of "A Field Office Guide for Interpreting Steamflow Forecasts".

IDAHO WATER SUPPLY OUTLOOK REPORT

FEBRUARY 1, 1992

SUMMARY

IDAHO SNOWPACK PERCENTAGES HAVE PLUMMETED FOLLOWING ONE OF THE DRIEST JANUARIES ON RECORD. SOME AREAS IN CENTRAL AND SOUTHERN IDAHO ARE REPORTING SNOWPACKS SIMILAR TO 1987, THE SECOND LOWEST ON RECORD. WITH OVER HALF OF THE WINTER ACCUMULATION SEASON BEHIND US, IT IS UNLIKELY THAT SNOWPACKS CAN RECOVER TO NORMAL LEVELS BEFORE THE RUNOFF SEASON BEGINS. COMBINED WITH NEARLY EMPTY RESERVOIRS IN MANY BASINS, THESE LOW SNOWPACKS POINT TO THE LIKELIHOOD OF CRITICALLY LOW WATER SUPPLIES ACROSS MUCH OF SOUTHERN AND CENTRAL IDAHO. WATER USERS SHOULD BE PREPARED FOR POTENTIAL WATER SHORTAGES AND SHOULD KEEP IN TOUCH WITH THEIR LOCAL IRRIGATION DISTRICTS FOR MORE SPECIFIC INFORMATION.

SNOWPACK

January's snowfall was extremely disappointing across the entire state except for the Panhandle which received near average snowfall. Many mountain SNOTEL sites received less than an inch of snow water content during the month; average increases should have been in the 4 to 7 inch range. Currently, snowpacks range from 70 to 90% of average in northern Idaho and 50 to 70% across most of the remainder of the state. Snowpack conditions in the Boise, Owyhee, and Portneuf river basins are similar to 1987, which reported the second lowest snowpack on record. With January typically providing about one quarter of the winter snowfall, the current deficit will be hard to make up during the remaining 2 to 3 months of winter.

PRECIPITATION

Mountain precipitation was almost non-existent during January with the exception of the Panhandle which reported 94% of normal precipitation for the month. The Clearwater basin, just south of the Panhandle, reported 55% of normal. The rest of the state reported very low amounts for the month, with the Wood and Lost river basins and the upper Snake in eastern Idaho receiving less than 20% of normal precipitation for the month. January is a critical precipitation month for Idaho because it is one of the highest precipitation months during the year. Temperatures were very mild during the last week of January; Boise broke several records with high temperatures near sixty.

RESERVOIRS

Reservoir storage continues to be a major contributing factor in the gloomy water supply outlook for 1992. Many reservoirs in southern and central Idaho are reporting storage levels less than 50% of average. Combined useable storage in the Boise River basin is only 275 thousand acre-feet (43% of average and 26% of capacity). Other reservoirs of concern include Magic, Oakley, Salmon Falls, Owyhee, and Bear Lake, all reporting less than 35% of capacity. Reservoirs in the Payette basin and on the Snake River continue to report good storage and should help buffer the effects of the anticipated low runoff this summer.

STREAMFLOW

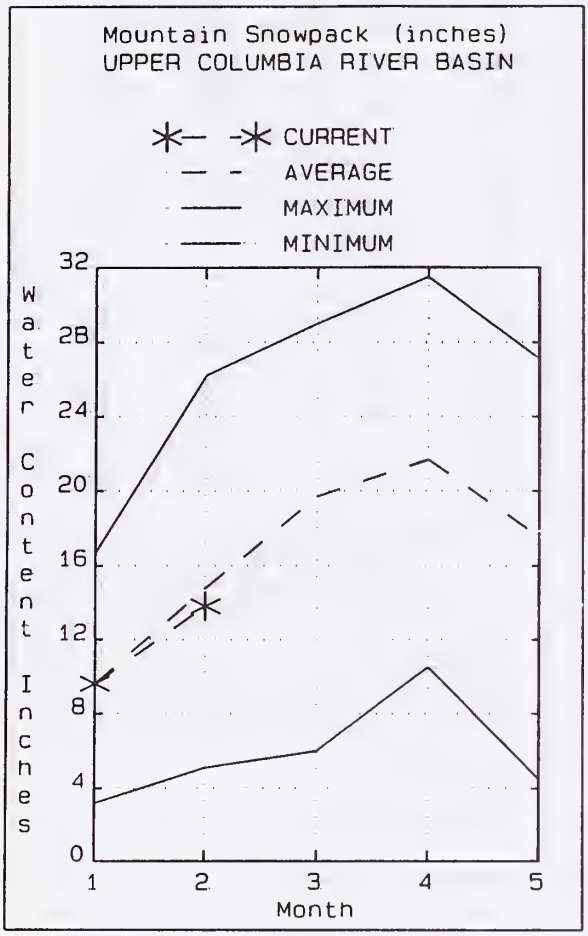
January streamflow was below normal in northern Idaho and the upper Snake, and well below normal throughout central and southern Idaho. These low base flow conditions are the result of several successive years of drier than average conditions. Below normal snow accumulation statewide in January has resulted in nearly all runoff projections decreasing from those reported last month. Central, southern, and eastern Idaho watersheds are expected to yield summer streamflows only in the 60 to 80% of average range. Exceptions to this are the Weiser and Boise Rivers (54% of average), Magic Reservoir inflow (38% of Average), Portneuf River at Topaz (53% of average), and Owyhee Reservoir inflow (46% of average). The outlook for northern Idaho is better, where streams are forecast to produce 82 to 96% of the average seasonal volumes this year. Water users in central and southern Idaho should be prepared for the possibility of critically short water supplies this summer.

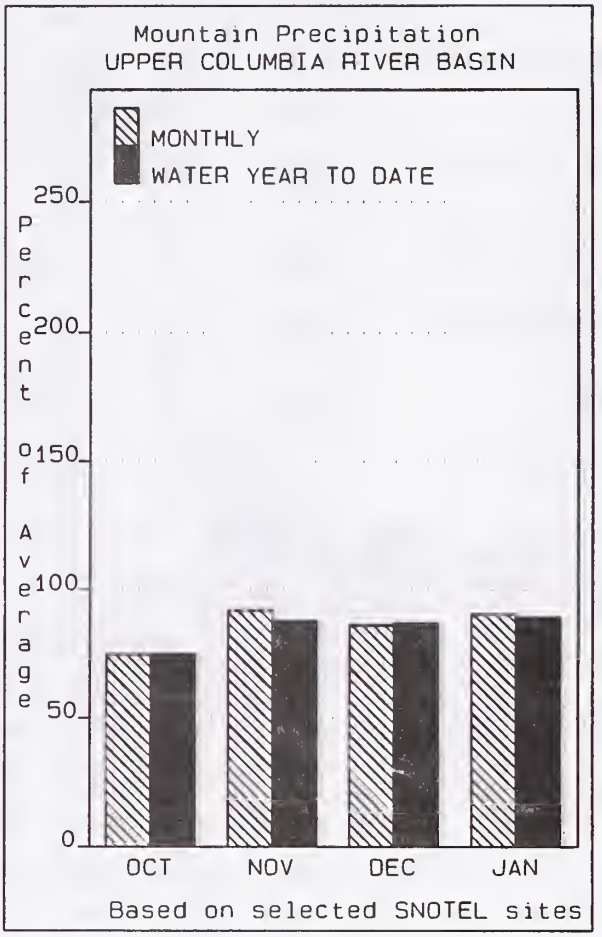
RECREATIONAL OUTLOOK

February 1 snowpack levels indicate that an earlier than normal runoff season with lower peak flows is to be expected this spring in central, southern, and eastern Idaho. Near average snowpacks in northern Idaho promise excellent whitewater boating on the Lochsa, Selway, Moyie, and St. Joe rivers. Boaters should plan for an early season on Idaho's southwest desert rivers. Additional snow accumulation during the remainder of the winter and the timing of the spring runoff will determine actual flow conditions on Idaho's rivers.

Upper Columbia River Basin

February 1, 1992





WATER SUPPLY OUTLOOK

The Panhandle region received the heaviest precipitation in the state for January. Mountain precipitation during January was 94% of normal and is 89% of normal for the water year. The snowpack percentages in this region did not decrease as much during January as other basins in the state. The snowpack is approximately 90% of average for most of the Panhandle except for the lower elevations which are about 70% of average. Streamflow volume forecasts range from 82% of average for the Pend Oreille Lake inflow to 96% for the Kootenai at Leonia. Storage is somewhat below normal for the reservoirs in this region. With near average snowpack conditions, water supplies should be adequate this summer.

UPPER COLUMBIA RIVER BASIN
Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	APR-SEP	6010	7320	7910	96	8500	9810	8275
	APR-JUL	5230	6360	6880	96	7400	8530	7199
	APR-JUN	4140	5060	5470	96	5880	6800	5701
CLARK FK at Whitehorse Rpds (1,2)	APR-SEP	6620	9220	10400	81	11600	14200	12910
	APR-JUL	6010	8380	9450	81	10500	12900	11730
	APR-JUN	5190	7200	8120	81	9040	11100	10050
PEND OREILLE LAKE inflow (1,2)	APR-SEP	7620	10500	11800	82	13100	16000	14370
	APR-JUL	6980	9610	10800	82	12000	14600	13150
	APR-JUN	5730	8210	9340	82	10500	12900	11390
PRIEST nr Priest River (1,2)	APR-SEP	490	690	780	90	870	1070	868
	APR-JUL	455	645	730	90	815	1000	814
COEUR D'ALENE at Enaville (1)	APR-SEP	345	615	740	91	865	1140	809
	APR-JUL	330	590	705	92	820	1080	769
ST. JOE at Calder	APR-SEP	695	965	1060	86	1160	1420	1237
	APR-JUL	770	905	1000	86	1090	1230	1169
SPOKANE nr Post Falls (1,2)	APR-SEP	1360	1920	2510	92	3100	3670	2720
	APR-JUL	600	1850	2420	92	2990	4240	2627

UPPER COLUMBIA RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	1984.0	2406.0	2362.0
FLATHEAD LAKE	1791.0	717.0	1128.0	1095.0
PEND OREILLE	1561.2	619.9	597.1	823.1
NOXON RAPIDS	335.0	310.4	308.4	314.2
COEUR D'ALENE	291.2	160.3	162.2	205.4
PRIEST LAKE	97.7	22.5	21.0	32.9

UPPER COLUMBIA RIVER BASIN
Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	28	71	96
Moyie River	2	61	83
Clark Fork River	49	94	94
Pend Oreille River	71	82	95
Priest River	4	95	90
Rathdrum Creek	4	89	61
Hayden Lake	0	0	0
Coeur d'Alene River	5	95	92
St. Joe River	2	87	94
Spokane River	11	92	84
Palouse River	1	81	69

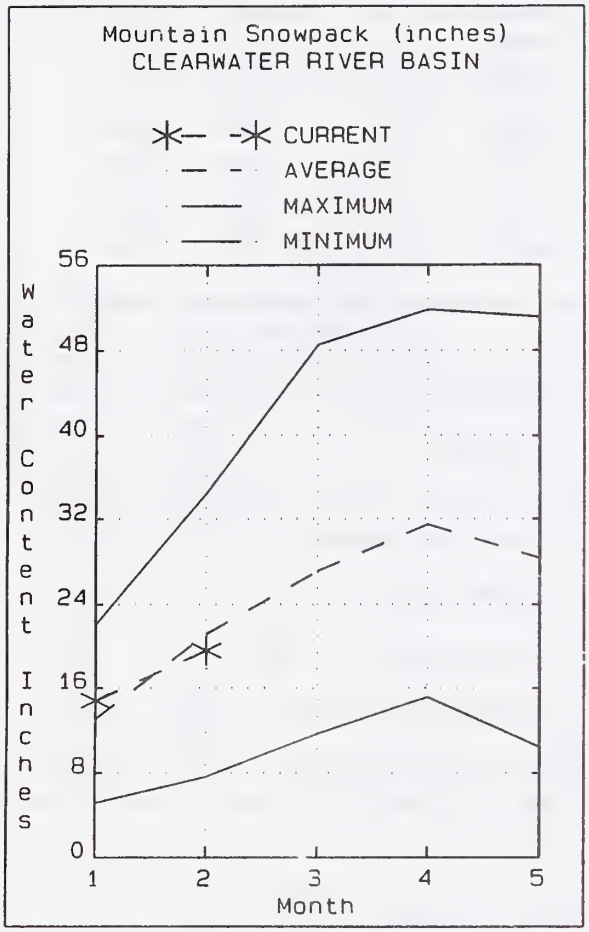
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

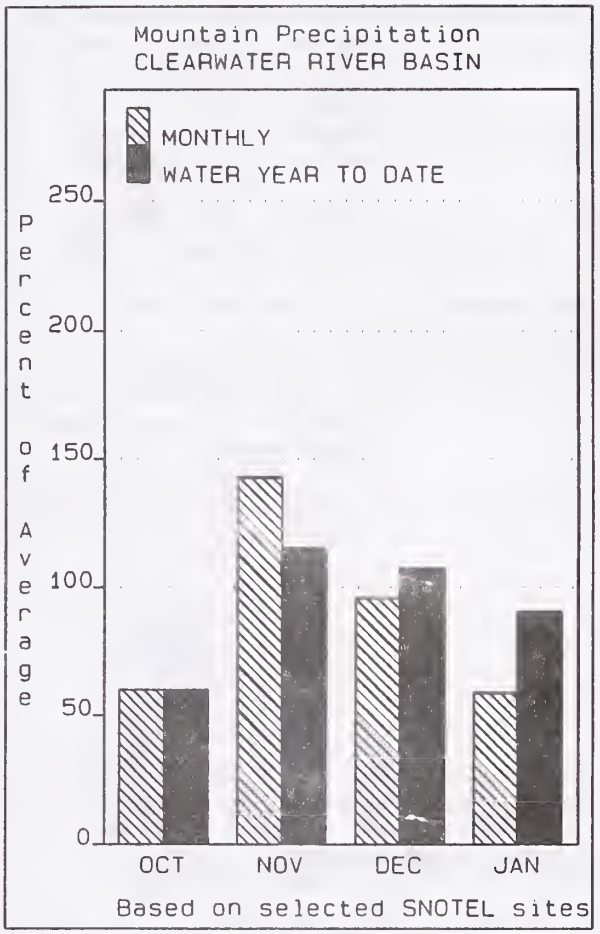
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Clearwater River Basin

February 1, 1992





WATER SUPPLY OUTLOOK

The Clearwater basin was the dividing point for January precipitation patterns with near average snowfall to the north and much below average amounts to the south. SNOTEL sites in the northern part of the Clearwater basin received about two-thirds of normal precipitation in January while the southern stations received only 40% of normal precipitation. The Clearwater basin reports a snowpack of 92% of average -- the best in the state. Streamflow volume forecasts range from 85% of average for the inflow to Dworshak Reservoir to 87% for the Clearwater at Orofino. Storage in Dworshak is 66% of average due to early season drafting for flood control, but is currently being operated to store water. Current indicators point to an adequate water supply for most users in 1992.

CLEARWATER RIVER BASIN

Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DWORSHAK RESERVOIR inflow (1)	APR-SEP	1230	2060	2440	85	2820	3650	2875
	APR-JUL	1160	1940	2300	85	2660	3440	2700
CLEARWATER at Orofino (1)	APR-SEP	2460	3740	4320	87	4900	6180	4976
	APR-JUL	2340	3550	4100	87	4650	5860	4718
CLEARWATER at Spalding (1,2)	APR-SEP	3870	6040	7020	87	8000	10200	8052
	APR-JUL	3680	5730	6660	87	7590	9640	7618

CLEARWATER RIVER BASIN

Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3467.8	1453.1	2119.5	2198.2

CLEARWATER RIVER BASIN

Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	12	85	91
Lochsa River	4	90	92
Selway River	5	88	92
Clearwater Basin Total	19	86	91

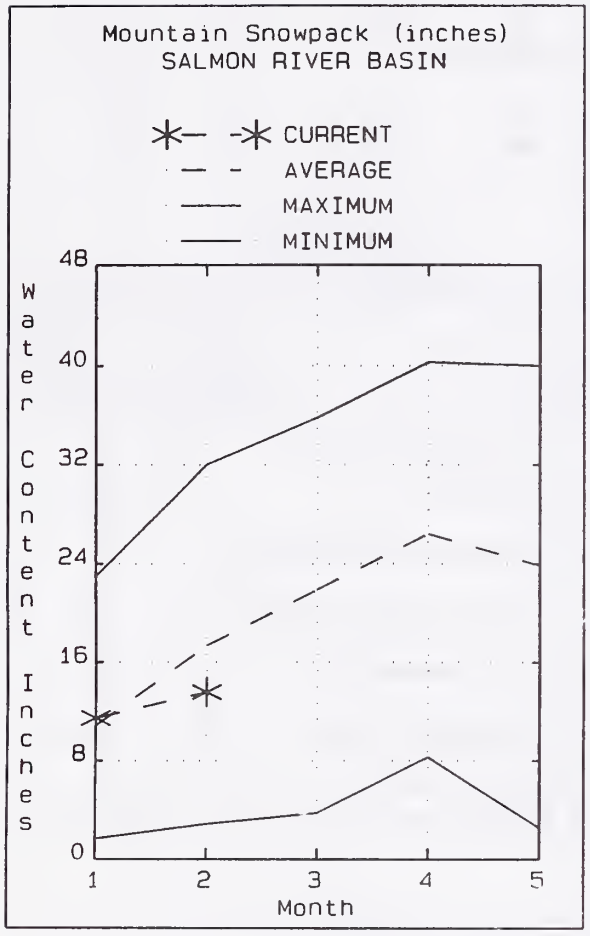
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

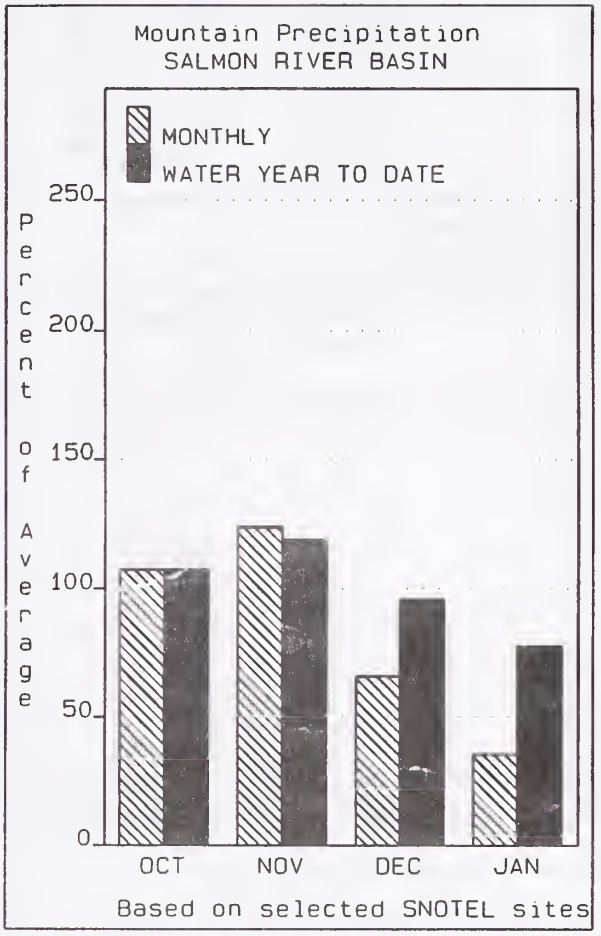
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Salmon River Basin

February 1, 1992





WATER SUPPLY OUTLOOK

January mountain precipitation was only 36% of normal for the Salmon basin although this was better than amounts received in the basins to the south. Low snowfall during January caused the basin snowpack percent of average to decrease approximately 30% during the month. The snowpack currently stands at 77% of normal for the basin. As a result, streamflow forecasts have also dropped from last month and range from 73% of average for the Salmon River at Salmon to 77% for the Salmon River at Whitebird. Whitewater enthusiasts should plan for slightly earlier than normal runoff, reduced peak flows, and an earlier recession to low flow conditions.

SALMON RIVER BASIN

Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	APR-SEP	305	610	745	73	880	1180	1019
	APR-JUL	260	520	635	73	750	1010	869
SALMON at White Bird (1)	APR-SEP	2810	4380	5090	77	5800	7370	6602
	APR-JUL	2530	3950	4590	77	5230	6650	5956

SALMON RIVER BASIN

Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SALMON RIVER BASIN

Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	8	124	68
Lemhi River	4	140	88
Middle Fork Salmon River	3	140	75
South Fork Salmon River	3	138	78
Little Salmon River	4	164	74
Salmon Basin Total	23	130	77

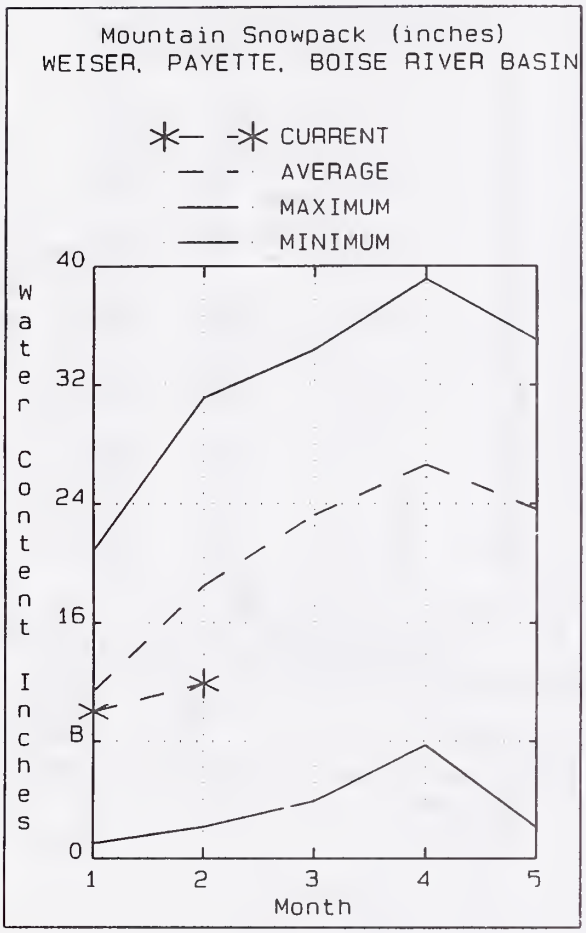
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

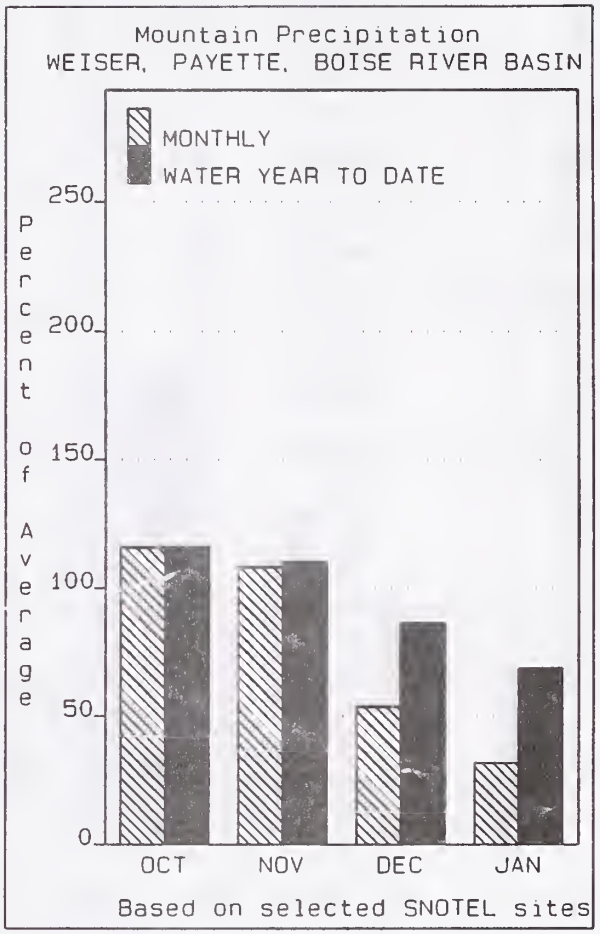
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Weiser, Payette, and Boise River Basin

February 1, 1992





WATER SUPPLY OUTLOOK

Mountain precipitation for January was only 32% of normal in these basins with Boise experiencing one of the driest Januaries on record. January's snowfall usually accounts for a quarter of the total winter snowfall, making it a critical snow accumulation month. The snowpack on the Boise basin is currently 52% of average, similar to conditions last year and in 1987. The Payette basin snowpack is 72% of average which is better than last year. The April through July streamflow volume forecast for the Boise River near Boise reflects the low snowpack and calls for only 54% of normal. Reservoir storage in the Boise system is at an all time low for February 1, with only 26% of capacity. Combined reservoir storage in the Payette system is much better at 96% of average. Water users should stay in touch with their local irrigation district and should prepare for water shortages in the Boise basin due to the low snowpack and critically low reservoir storage.

WEISER, PAYETTE, AND BOISE RIVER BASIN
Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WEISER nr Weiser (1)	APR-SEP	4.0	147	225	54	305	475	415
	APR-JUL	4.0	137	210	54	285	445	386
SF PAYETTE at Lowman	APR-SEP	275	335	375	77	415	475	488
	APR-JUL	240	295	330	76	365	420	432
DEADWOOD RESERVOIR inflow (1)	APR-JUL	58	82	98	72	114	137	136
NF PAYETTE at Cascade (1,2)	APR-SEP	260	375	425	80	475	590	533
	APR-JUL	250	355	400	80	445	550	498
NF PAYETTE nr Banks (2)	APR-SEP	400	510	585	85	660	770	690
	APR-JUL	380	480	550	85	620	720	648
PAYETTE nr Horseshoe Bend (1,2)	APR-SEP	755	1130	1320	75	1510	1880	1755
	APR-JUL	670	1050	1220	75	1390	1770	1618
BOISE nr Twin Springs (1)	APR-SEP	260	375	425	62	475	590	686
	APR-JUL	225	335	385	61	435	545	631
SF BOISE at Anderson Rnch Dm (1,2)	APR-SEP	123	240	295	51	350	465	582
	APR-JUL	107	220	270	50	320	435	544
BOISE nr Boise (1,2)	APR-SEP	410	700	830	54	960	1250	1535
	APR-JUL	240	615	740	52	865	1220	1421
	APR-JUN	345	565	665	53	765	985	1264

WEISER, PAYETTE, AND BOISE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.3	1.8	2.2	5.4
CASCADE	703.2	413.2	452.5	409.4
DEADWOOD	162.0	57.9	82.6	79.5
ANDERSON RANCH	464.2	75.6	175.8	300.6
ARROWROCK	286.6	121.4	204.5	223.9
LUCKY PEAK	307.0	77.8	66.2	117.4
LAKE LOWELL (DEER FLAT)	177.0	71.9	58.7	131.0

WEISER, PAYETTE, AND BOISE RIVER BASIN
Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	135	62
Weiser River	3	154	65
North Fork Payette	8	142	78
South Fork Payette	4	133	66
Payette Basin Total	13	136	72
Middle & North Fork Boise	7	102	54
South Fork Boise River	6	112	54
Moores Creek	4	75	47
Boise Basin Total	13	97	52
Canyon Creek	0	0	0

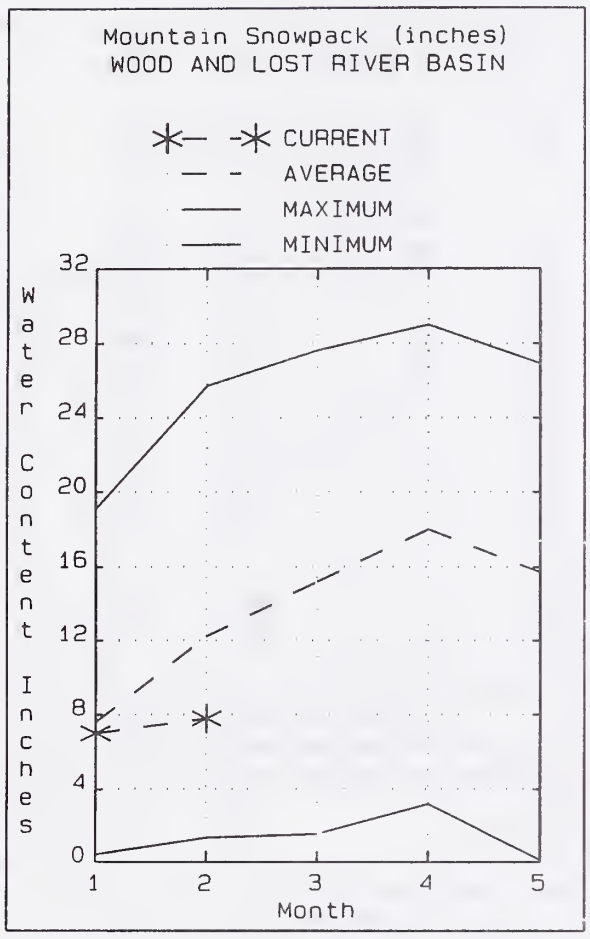
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

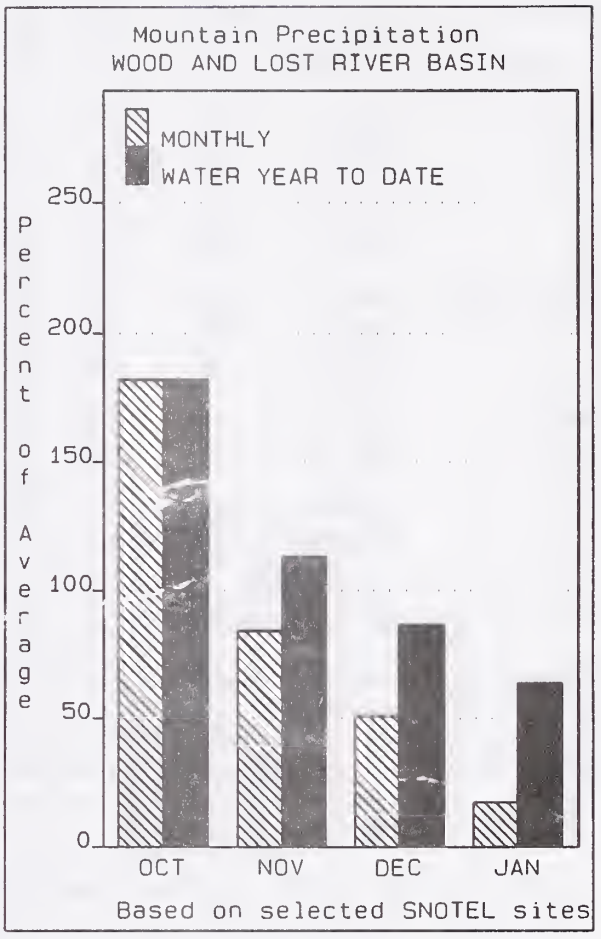
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Big Wood, Little Wood, Big Lost, and Little Lost River Basin

February 1, 1992





WATER SUPPLY OUTLOOK

Mountain precipitation during January was very poor at only 19% of normal. SNOTEL sites which usually receive 3 to 5 inches during January received less than one inch of precipitation. Snowpack conditions are currently better than last year, but are still only 59% to 75% of average. Low elevation watersheds are even worse; Camas Creek reports a snowpack of only 43% of average. Streamflow forecasts call for well below normal runoff for both the Wood and Lost River basins. Storage in Magic Reservoir is only ten percent of capacity and the April through September inflow is projected to be just 38% of average. Mackay Reservoir inflow is forecast somewhat better at 70% of average. Water users in this area should prepare for yet another season of critically short water supplies and should keep in touch with their local irrigation districts for more information.

BIG WOOD, LITTLE WOOD, BIG LOST, AND LITTLE LOST RIVER BASIN
Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<=== Drier ===== Future Conditions ===== Wetter ===>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD nr Bellevue	APR-SEP	16.0	64	96	49	128	176	197
	APR-JUL	11.0	57	88	48	119	165	183
BIG WOOD bl Magic Dam (2)	APR-SEP	62	71	118	38	165	345	309
	APR-JUL	3.0	66	112	38	158	225	294
LITTLE WOOD nr Carey	APR-SEP	24	44	57	58	71	90	99
	APR-JUL	19.0	38	51	55	64	83	92
BIG LOST at Howell Ranch nr Chilly	APR-SEP	102	133	155	75	177	210	206
	APR-JUL	86	115	135	75	155	184	181
	APR-JUN	69	90	104	74	118	139	141
BIG LOST bl Mackay Reservoir (2)	APR-SEP	79	108	128	70	148	177	182
	APR-JUL	59	87	105	70	123	151	150
LITTLE LOST bl Wet Ck	APR-SEP	16.0	23	27	69	32	38	39
	APR-JUL	14.0	19.0	22	71	25	30	31
LITTLE LOST nr Howe	APR-SEP	24	30	33	77	37	42	43
	APR-JUL	19.0	22	25	76	28	32	33

WOOD AND LOST RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	19.1	19.3	92.8
LITTLE WOOD	30.0	12.1	8.7	15.5
CAREY VALLEY		NO REPORT		
MACKAY	44.5	21.7	18.9	30.0

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
Big Wood ab Magic	8	154	62
Camas Creek	2	143	43
Big Wood Basin Total	10	153	59
Little Wood River	3	211	67
Fish Creek	0	0	0
Big Lost River	4	212	65
Little Lost River	3	145	75

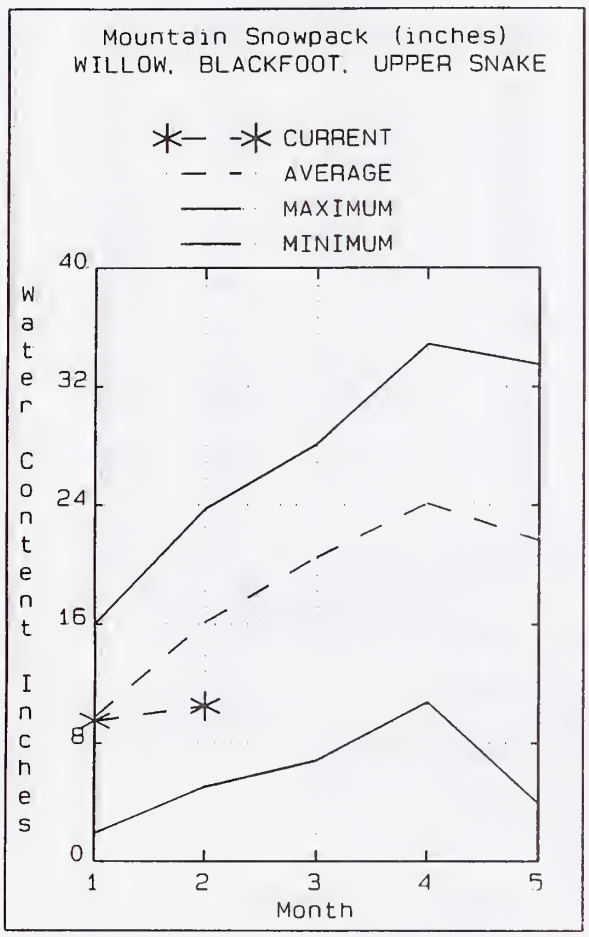
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

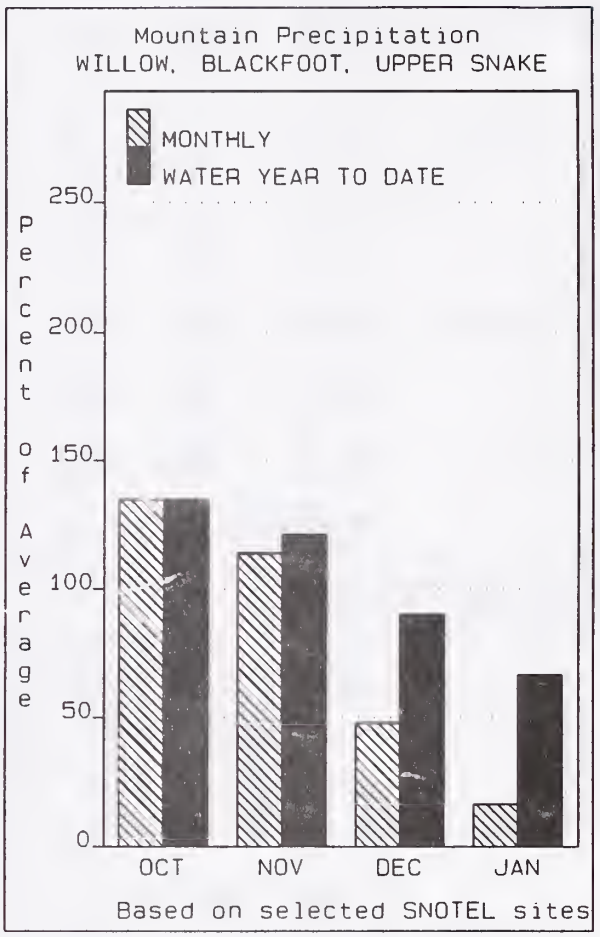
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

Willow Creek, Blackfoot, Upper Snake, and Portneuf River Basin

February 1, 1992





WATER SUPPLY OUTLOOK

Mountain precipitation during January was dismal at only 17% of normal. Sites which normally receive 5 to 7 inches of precipitation during January received only an inch or so. Snowpack percer ages which were near normal on January 1 decreased significantly and are now in the 60 to 70% range for most watersheds. The Blackfoot and Portneuf basins are even lower at 52 and 42% of average, respectively. As a result, streamflow forecasts have decreased from last month and now range from 56% for the Portneuf River at Topaz to 80% for the Falls River near Squirrel. On the bright side, the combined storage for 9 reservoirs is 97% of average (67% of capacity). The remainder of the snow accumulation season will determine the fate of the water supply picture for eastern Idaho. Water users should stay in contact with their local irrigation districts for more specific information.

WILLOW CREEK, BLACKFOOT, UPPER SNAKE, AND PORTNEUF RIVER BASIN
Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HENRYS FORK nr Ashton (2)	APR-SEP	480	535	570	78	605	660	730
	APR-JUL	360	400	425	78	450	490	544
HENRYS FORK nr Rexburg (2)	APR-SEP	775	975	1110	72	1240	1440	1540
	APR-JUL	595	750	855	70	960	1120	1219
FALLS nr Squirrel (1,2)	APR-JUL	215	265	290	80	315	370	364
TETON ab S Leigh Ck nr Driggs	APR-SEP	114	131	143	72	155	172	199
	APR-JUL	87	100	109	71	118	131	153
TETON nr St. Anthony	APR-SEP	275	320	355	75	390	435	471
	APR-JUL	220	260	285	75	310	350	380
SNAKE nr Moran (1,2)	APR-SEP	450	545	605	70	665	755	869
PALISADES RESERVOIR inflow (1,2)	APR-SEP	1620	2330	2650	70	2970	3680	3763
SNAKE nr Heise (2)	APR-SEP	1740	2380	2850	70	3320	3970	4049
	APR-JUL	1420	2000	2400	70	2800	3380	3451
SNAKE nr Blackfoot (1,2)	APR-SEP	1950	3110	3630	66	4150	5310	5482
	APR-JUL	1590	2530	2950	66	3370	4310	4444
PORTNEUF at Topaz	MAR-SEP	34	49	60	56	71	86	107
	MAR-JUL	24	37	46	53	55	68	86

WILLOW CREEK, BLACKFOOT, UPPER SNAKE, AND PORTNEUF BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ISLAND PARK	127.6	94.7	86.0	100.7
GRASSY LAKE	15.2	12.1	13.1	10.7
JACKSON LAKE	824.7	641.7	545.2	535.6
PALISADES	1357.0	838.6	408.0	1016.0
AMERICAN FALLS	1700.0	1053.6	964.5	1141.5
BROWNLEE	975.3	857.5	788.9	665.4
BLACKFOOT	348.7	103.0	86.6	235.8
HENRYS LAKE	90.4	82.0	80.4	78.7
RIRIE	96.5	47.0	44.7	48.5

WILLOW CREEK, BLACKFOOT, UPPER SNAKE, AND PORTNEUF BASIN
Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Camas-Beaver Creeks	4	152	69
Henrys Fork River	10	111	78
Teton River	8	89	70
Snake above Jackson Lake	10	94	68
Pacific Creek	3	87	66
Gros Ventre River	4	81	65
Hoback River	6	79	59
Greys River	6	87	59
Salt River	6	90	69
Snake above Palisades	34	90	66
Willow Creek	8	67	60
Blackfoot River	4	74	54
Portneuf River	6	52	42
Toponce Creek	0	0	0
Snake abv American Falls	50	82	62

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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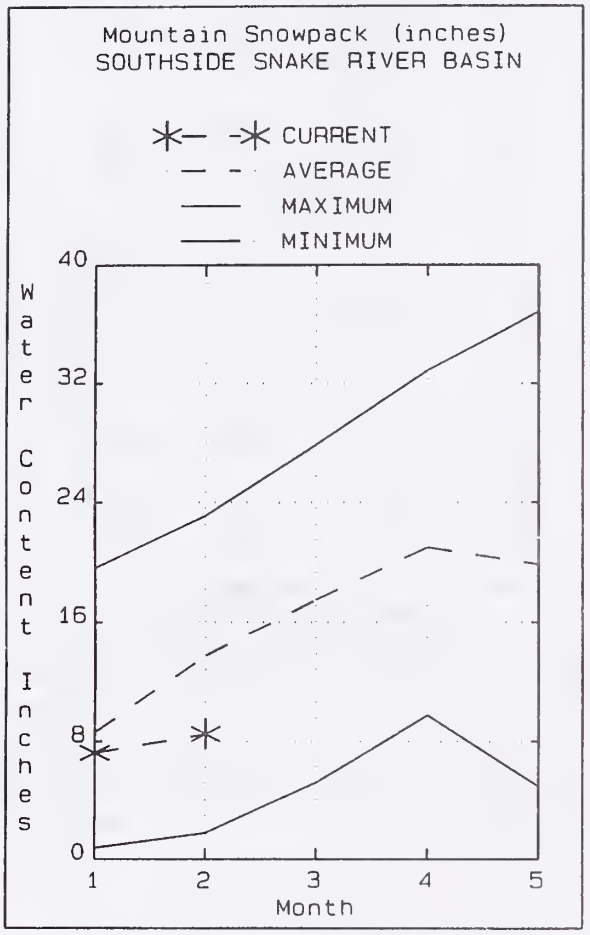
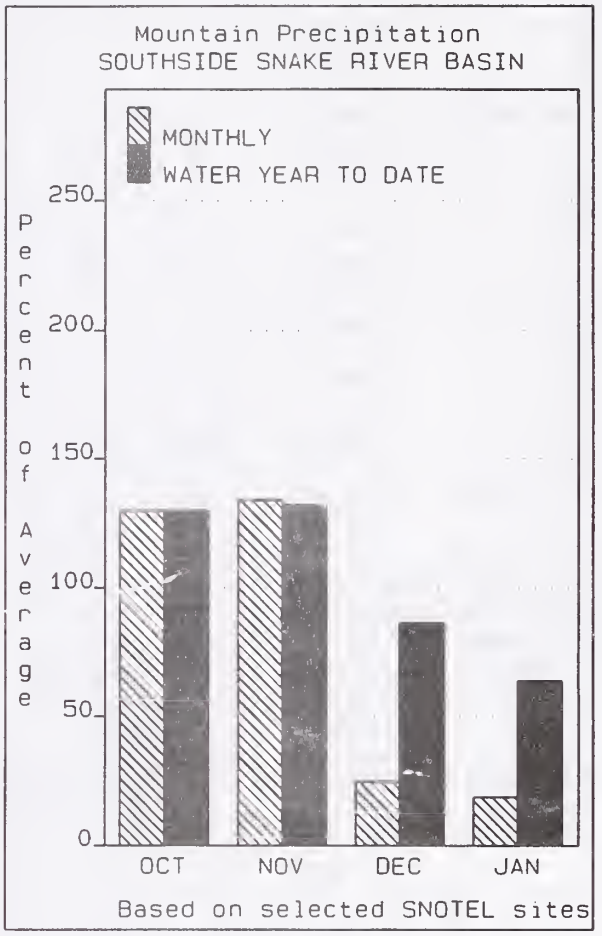
Southside Snake River Basin

February 1, 1992





WATER SUPPLY OUTLOOK

Mountain precipitation for January was very disappointing, with only 19% of normal. Snowpack conditions range from 56% of average in Bruneau basin to 78% of average in Salmon Falls Creek basin. The Owyhee basin snowpack is only 38% of average and is one of the lowest snowpacks in the state and also for the historical record. As a result of the low snowpack conditions, streamflow volume forecasts have also decreased and range from 46% for the Owyhee Reservoir inflow to 66% for the Salmon Falls Creek near San Jacinto. Oakley, Salmon Falls, and Owyhee reservoirs all report less than 20% of useable capacity. Water users should prepare for another season with well below normal water supplies and should stay in contact with their local irrigation districts for more specific information.

SOUTHSIDE SNAKE RIVER BASIN
Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESERVOIR inflow	MAR-SEP	10.0	16.0	23	62	30	37	37
	MAR-JUL			21	62			34
SALMON FALLS CK nr San Jacinto	MAR-SEP	24	46	63	66	80	102	96
	MAR-JUL	20	44	60	66	76	100	91
	MAR-JUN	21	42	57	66	72	93	86
BRUNEAU nr Hot Spring	MAR-SEP	42	108	148	60	189	255	246
	MAR-JUL	45	102	140	60	179	235	235
OWYHEE nr Gold Ck (2)	MAR-JUL	0.4	10.4	17.5	50	25	35	35
OWYHEE nr Owyhee (2)	APR-JUL	1.0	25	43	50	61	88	86
OWYHEE nr Rome	FEB-JUL	6.0	137	260	42	385	565	622
OWYHEE RESERVOIR inflow (1,2)	APR-SEP	4.0	47	188	45	330	640	418
	FEB-JUL	7.0	169	300	46	430	720	656

SOUTHSIDE SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	7/ 4	8.8	8.1	26.5
SALMON FALLS	182.6	14.6	14.1	49.3
OWYHEE	715.0	112.9	221.0	464.0

SOUTHSIDE SNAKE RIVER BASIN
Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	1	109	64
Goose-Trapper Creeks	2	98	62
Salmon Falls Creek	5	95	78
Bruneau River	9	82	56
Owyhee Basin Total	20	60	38

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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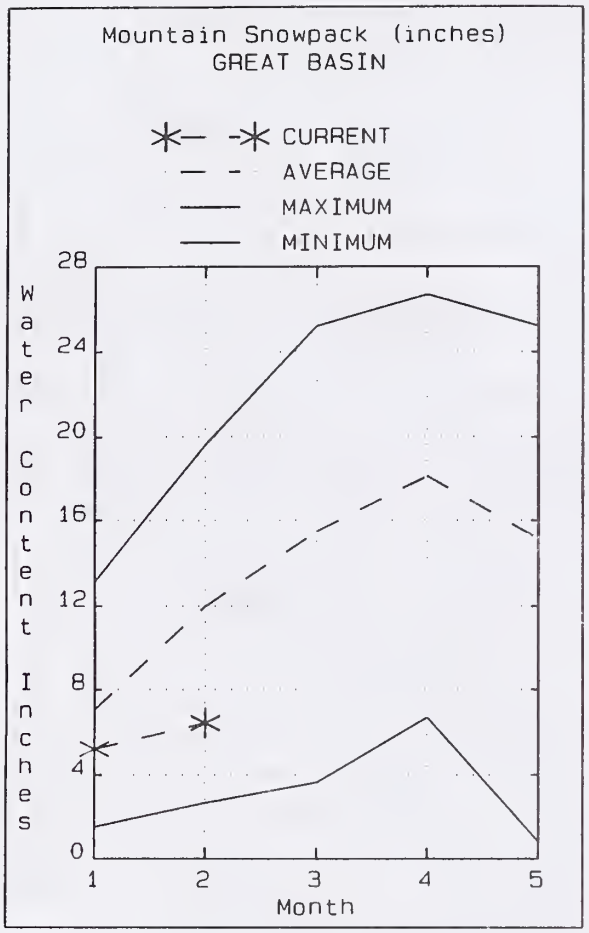
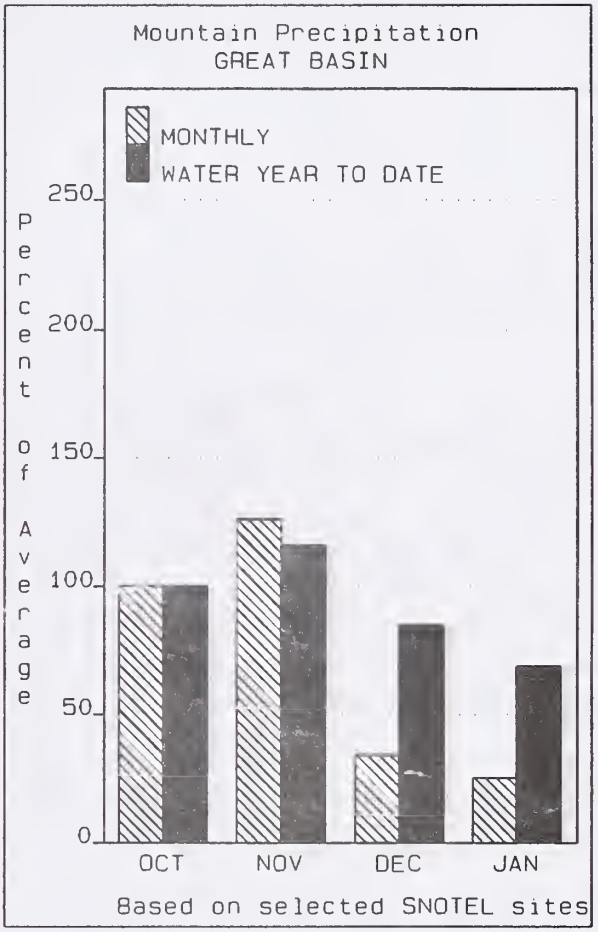
Great Basin

February 1, 1992





WATER SUPPLY OUTLOOK

January mountain precipitation was disappointing in the Bear River area at only 26% of normal. Trial Lake SNOTEL in the Bear River headwaters received only two-tenths of an inch of precipitation during the month; the January average is over five inches. As a result, snowpack percentages have decreased since January 1 and currently range from 35% of normal for the Malad River to 61% for the Bear River above Harer. Streamflow forecasts have also decreased accordingly. Montpelier Creek near Montpelier and the Cub River near Preston are both forecast at 62% of average while the Bear River near Harer is forecast at 67% for the April through September period. Reservoir storage for Bear Lake and Montpelier Creek reservoirs are 33 and 25% of capacity, respectively. Water users should stay in touch with their local irrigation districts and be prepared for possible water shortages.

GREAT BASIN

Streamflow Forecasts - February 1, 1992

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BEAR RIVER near Harer	APR-SEP	43	154	230	67	305	415	345
MONTPELIER CK nr Montpelier	APR-SEP	1.3	5.6	8.6	62	11.6	15.9	13.9
CUB RIVER near Preston	APR-SEP			32	62			52
	APR-JUL	9.0	21	29	62	37	49	47

GREAT BASIN

Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	466.7	493.6	987.6
MONTPELIER CREEK	4.0	1.0	0.6	1.7

GREAT BASIN

Watershed Snowpack Analysis - February 1, 1992

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Bear River (above Harer)	10	89	61
Montpelier Creek	4	85	60
Mink Creek	1	69	44
Cub River	3	79	56
Malad River	1	50	35

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

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Basin Outlook Reports
and
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For more water supply and resource management information, contact:

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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Basin Outlook Reports

February 1, 1992

In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

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